IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/051,442 §		
Filed: January 18, 2002 §	Examiner:	Hanne, Sara M.
Inventor(s): §	Group/Art Unit:	2179
Sundeep Chandhoke, Nicolas §	Atty. Dkt. No:	5150-58200
Vazquez, David W Fuller, and §		
Christopher Cifra §		
Title: System and Method for §		
Graphically Creating a §		
Sequence of Motion Control, §		
Machine Vision, and Data §		
Acquisition (DAQ) Operations §		
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REQUEST FOR PRE-APPEAL BRIEF REVIEW

Dear Sir or Madam:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a Notice of Appeal. The review is requested for the reason(s) stated below.

Applicant is in receipt of the Final Office Action mailed October 20, 2006. Claims 1-4, 6-24, 26-30, 32-40, 42-46, 48-54, 57-62, and 66-81 are pending in the case. Reconsideration of the present case is earnestly requested in light of the following remarks. Please note that for brevity, only the primary arguments directed to the independent claims are presented, and that additional arguments, e.g., directed to the subject matter of the dependent claims, will be presented if and when the case proceeds to Appeal.

Section 102(e) Rejections

Claims 53, 54, and 57-60 were rejected under 35 U.S.C. 102(e) as being anticipated by Blowers et al., U.S. Patent No. 6,298,474 (hereinafter "Blowers"). Applicant respectfully traverses this rejection.

Claim 53 recites in pertinent part, "wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test." The Examiner has interpreted Blowers's camera as Applicant's "DAQ measurement device" recited in claim 53, and has interpreted Blowers's Caliper tool operation of finding edges used to calculate measurements as a DAQ operation.

However, claim 53 recites, "wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test." The Caliper tool detects features in an image that has been acquired by the camera (Col. 9, lines 44-52), but the Caliper tool is not operable to control the camera (which the Examiner has interpreted as the DAQ measurement device), as recited in claim 53. In particular, the Caliper tool is not operable to control the camera to acquire measurement data of a device under test.

Moreover, Applicant respectfully notes that Blowers's Caliper operation of finding and measuring edges in an acquired image is an analysis operation, not a data acquisition (DAQ) operation, which, as is known to those of skill in the DAQ arts, acquires data from (samples) some real world phenomenon. In other words, the Examiner's interpretation of the Caliper tool measuring aspects of the acquired image as a DAQ operation that controls a DAQ measurement device to acquire measurement data of a device under test is improper, for at least the reasons that the acquired image is not a device under test, and that the Caliper tool does not control the camera at all, much less to acquire data from a device under test.

Applicant further submits that per Applicant's Specification, Blowers's camera is more properly characterized as an image acquisition device for machine vision operations. Claim 58 particularly makes to this distinction, referring to an image acquisition device for acquiring images of the device under test (for machine vision operations), and the DAQ measurement device for acquiring the measurement data of the device under test.

Thus, Applicant submits that Blowers clearly does not teach the above-recited limitations of claim 53, and thus, claim 53 is patentably distinct over Blowers for at least this reason, and so claim 53 and those claims dependent therefrom are allowable.

Applicant respectfully submits that the dependent claims recite further limitations not taught by Blowers. For example, claim 60 recites the additional limitations of, "automatically generating a graphical program based on the sequence of operations, wherein the graphical program is executable to perform the sequence of operations, wherein the graphical program comprises a plurality of interconnected nodes that visually indicate functionality of the graphical program, wherein automatically generating the graphical program comprises automatically including the plurality of interconnected nodes in the graphical program without user input specifying the nodes." The Office Action refers to the tree structure such as shown in FIG. 7 of Blowers. However, this tree structure is not automatically generated. On the contrary, the icons are included in the tree structure in response to user input selecting the icons (Col. 8, lines 61 – 67). Blowers does not teach the concept of automatically generating a graphical program, wherein automatically generating the graphical program comprises automatically including a plurality of interconnected nodes in the graphical program without user input specifying the nodes. In the

Response to Arguments, the Examiner incorrectly interprets Blowers's creation of a machine vision computer program (by manually assembling the tree structure) without the user having to write any code as automatically generating a graphical program. However, even a casual reading of Blowers makes clear that the "code" referred to is standard "text-based" program code, and that the manual creation of the tree structure relieves the user of having to write such text-based program code, but does *not* mean that the tree structure is automatically generated without user input specifying the nodes. Moreover, Blowers's tree structure is nowhere describes as a graphical program.

Section 103(a) Rejections

Claims 1-4, 6-20, 24, 26-30, 32-40, 42-46, 48-52, 61-62, 66-69, 71-73, 76 and 78 were rejected under 35 U.S.C. 103(a) as being unpatentable over Blowers et al., U.S. Patent No. 6,298,474 (hereinafter "Blowers") in view of Weinhofer, U.S. Patent No. 6,442,442 (hereinafter "Weinhofer"). Applicant respectfully traverses these rejections.

As per claims 1-44 and 61-78, the independent claims recite similar limitations regarding DAQ operations as discussed above with respect to claim 53, and so the arguments presented above with respect to DAQ operations and DAQ devices regarding Blowers apply with equal force to these claims. Nor does Weinhofer remedy these deficiencies of Blowers, since Weinhofer also fails to teach or suggest the DAQ functionality claimed. More generally, regarding the independent claims 1, 30, 36, 37, 43, 44, neither Blowers nor Weinhofer teaches or suggests "including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations; wherein the plurality of operations included in the sequence includes *at least one motion control operation, at least one machine vision operation, and at least one DAQ operation...wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test*", as recited in these claims.

Additionally, regarding independent claims 1, 30, 36, 37, 43, 44, 45, and 61, neither Blowers or Weinhofer discloses including at least one motion control operation in a sequence without receiving user input specifying program code for performing the motion control operation. Weinhofer teaches that the user creates a graphical data flow program that comprises a plurality of interconnected icons, where connections between the icons represent data flow between the icons (Col. 3, line 63 – Col. 4, line 7; and Col. 6, lines 5 – 38). The icons and the connections between the icons constitute graphical program code that defines the functionality of the graphical program. Weinhofer does not teach including motion control operations in a sequence in response to user input, but without receiving user input specifying program code for performing the motion control operations.

3

The Examiner admits that Blowers fails to teach "the motion control functionality with a motion control operation as recited in the claims", but then asserts that Weinhofer remedies this admitted deficiency of Blowers, citing Weinhofer, col.3, lines 63, et seq., and Fig. 3. In response to Applicant's argument that Weinhofer does not teach including at least one motion control operation in a sequence without receiving user input specifying program code for performing the motion control operation, (in the Response to Arguments) the Examiner states that the rejection does not rely on Weinhofer to teach "including at least one motion control operation in a sequence without receiving user input specifying program code for performing the plurality of operations". Applicant thus submits that per the Examiner's own statements, neither Blowers nor Weinhofer discloses this claimed feature.

Furthermore, Applicant submits that a *prima facie* case of obviousness has not been established for claims 1-52 and 61-78. In particular, Applicant respectfully submits that there is no evidence of any teaching, suggestion, or motivation to combine Blowers and Weinhofer.

Applicant submits that neither Weinhofer nor Blowers contain any clear teaching or suggestion for combining the two references. Blowers is directed toward developing software for machine vision applications. Weinhofer is directed toward developing software for motion control applications. Applicant can find no teaching in Blowers regarding the development of software to perform an application involving motion control as taught in Weinhofer. Similarly, Applicant can find no teaching in Weinhofer regarding the development of software to perform an application involving machine vision as taught in Blowers. Thus, there would be no motivation for incorporating the machine vision operations taught in Blowers into Weinhofer's system or for incorporating the motion control operations taught in Weinhofer into Blowers's system.

In response to Applicant's arguments, the Examiner asserts that, "In this case, Weinhofer explains how motion controllers are part of many industrial control systems including programmable controller systems (Col. 1, line 48). Blowers teaches a programmable controller system." However, the cited portion of Weinhofer states that, "Motion controllers may for example be provided in the form of modules for a programmable controller system or as PC-based expansion cards or stand-alone units that communicate with the programmable controller system via a network communication link." Applicant submits that this simply describes a motion control system architecture in which motion controllers are provided in the form of modules for a programmable controller system, and says nothing about performing a machine vision application such as taught in Blowers, and does not amount to a clear and particular teaching or suggestion for combining Weinhofer with Blowers. Applicant respectfully submits that the Examiner's observation that Weinhofer's graphical automotive controller may be used in a plethora of systems in no way provides a clear and distinct motivation to combine with Blowers.

4

Thus, Blowers and Weinhofer may not properly be combined to make a prima facie case of obviousness. Moreover, even were Blowers and Weinhofer properly combinable, which Applicant argues they are not, the resulting combination would still not produce Applicant's invention as claimed, as shown above.

Applicant thus submits that Blowers and Weinhofer, taken either singly or in combination, do not teach all the limitations of claims 1-4, 6-20, 24, 26-30, 32-40, 42-46, 48-52, 61-62, 66-69, 71-73, 76 and 78, and thus, these claims are allowable for at least this reason.

Claims 21-23, 70, 74-75, 77, and 79-81 were rejected under 35 U.S.C. §103(a) as being unpatentable over Blowers, Weinhofer, and Wolfson. Applicant respectfully traverses these rejections.

Applicant thus respectfully submits that since the independent claims have been shown above to be patentably distinct and non-obvious over the prior art, these dependent claims are also patentably distinct and non-obvious, for at least this reason. Applicant also submits that Wolfson does not teach the limitations recited in claims 21-23, 70, 74-75, 77, and 79-81, either singly or in combination with the other references. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

In light of the foregoing amendments and remarks, Applicant submits the application is now in condition for allowance, and an early notice to that effect is requested. If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above-referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. The Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to Meyertons, Hood, Kivlin, Kowert & Goetzel P.C., Deposit Account No. 50-1505/5150-58200/JCH.

Also filed herewith are the following items:

☒ Notice of Appeal

Respectfully submitted,

/Mark S. Williams/
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5